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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,501	02/17/2000	William L. O'Meara	102001-200	7115

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WIGGIN AND DANA LLP
ATTENTION: PATENT DOCKETING
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EXAMINER	
FELTON, AILEEN BAKER	
ART UNIT	PAPER NUMBER
3641	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/505,501	O'MEARA ET AL.
	Examiner	Art Unit
	Aileen B. Felton	3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 May 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7 and 19-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen(2,292,469) in view of Jacobson(4,094,248) and Smith et al(5,682,013).

Olsen discloses a propellant composition that comprises nitrocellulose and ethyl acetate as solvent (page 2, col. 1, lines 10-11), diphenylamine (pg. 2, col. 2, lines 13-15), dibutylphthalate, and nitroglycerin (pg. 3, col. 2 lines 35-40). On pg. 2, col 1, it is indicated that the viscosity can be modified by the use of increased or decreased solvent and that one viscosity is such that a 5/16" diameter steel ball requires 1,000 seconds to fall ten inches. It is also indicated here that lower viscosities tend to speed the purification. The composition may be extruded through dies to form a perforated cylindrical grain or further changed into any desired form (pg. 4, col. 2, lines 25-32). This reference indicates in several places the ratio of solvent to nitrocellulose, on pg. 3, col.1, lines 5-15, the ratio can range from 8:1 to 4:1. It also indicates that the particles can be composed of 4-6 parts of solvent to about 5 parts nitrocellulose. Further, on pg. 4, col.2, lines 18-21, indicate that the solvent content is reduced to a point where the

globules contain 8 parts solvent to 10 parts nitrocellulose. These ratios can readily be converted into percentages. The particular shape is not disclosed.

Jacobson and Smith et al teach two propellant shapes. Jacobson teaches a shape with external grooves and Smith teaches one with a cylindrical shape.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the composition of Olsen into the shapes taught by Jacobson and Smith et al since it is suggested by Olsen that the propellant can be formed into any shape. It would also have been obvious to vary the viscosity of the lacquer to suit any purpose since Olsen suggests that this can be easily done by varying the amount of solvent. There is also no indication that the viscosity obtained by Olsen is any different than that which is claimed by the Applicant. Thus, the viscosity is considered an inherent property of the composition of Olsen. As to limitations which are considered to be inherent in a reference, note the case law of *In re Ludke*, 169 USPQ 563; *In re Swinehart*, 169 USPQ 226, *In re Fitzgerald*, 205 USPQ 594; *In re Best et al*, 195 USPQ 430; and *In re Brown*, 173 USPQ 685, 688. It is also noted that the claims only require nitrocellulose, solvent, and stabilizer and list all the other ingredients such as nitroglycerin and dibutylphthalate as optional. It would be obvious to one of ordinary skill to determine the amounts of these ingredients needed and also since no amount is disclosed by Olsen there is no way to know that the amount isn't the same amount that is claimed by Applicant. It would be obvious to vary the amounts of solvent and nitrocellulose within the ranges indicated by Olsen. It is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in

the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

Response to Arguments

3. Applicant's arguments filed 5/25/2004 have been fully considered but they are not persuasive. The percents are not shown in the disclosure but ratios of solvent to nitrocellulose are shown in page 3, lines 4-17. The viscosity is also shown on page 2, lines 33-37. Olsen clearly discloses that the viscosity can be varied to suit many purposes by merely altering the amount of solvent used. See page 2, lines 24-30 where the viscosity of the lacquer is discussed. Also, even though the patent suggests that using less solvent results in less expense, the ratios disclosed meet the claimed percentages of the instant invention. Applicant also argues that the amount of stabilizer is not disclosed but see col. 4, lines 20-55 where amounts of nitrocellulose, solvent and stabilizer are shown. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. For example, Applicant has not pointed out how the ratios of solvent and nitrocellulose differ from the percentages as claimed. One of skill would certainly be able to convert these ratios into percentages.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aileen B. Felton whose telephone number is 703.306.5751. The examiner can normally be reached on Monday-Friday 6:30-4:00, except alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703.306.4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aileen Felton
AILEEN FELTON
PRIMARY EXAMINER